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REPORT

BY

SPECIAL COMMITTEE

TO EXAMINE INTO AND INVESTIGATE THE

FISHING INDUSTRIES OF THIS STATE

TO THE

FIFTEENTH REGULAR SESSION.

1889.

1859.

SALEM, OREGON:
FRANK C. BAKER, STATE PRINTER.
1888.

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REPORT.

To the Honorable Senate and House of Representatives of the State of Oregon:

In accordance with the provisions of senate concurrent resolution No. 15, adopted by the legislative assembly of the State of Oregon at its fourteenth regular session, 1887, we, the joint committee, consisting of two from the senate and three from the house, charged with the duty of meeting during the interval between the sessions of the legislature, examining into the condition and needs of the fish industry of the State, and reporting to the legislature at its next regular session the result of such investigation and the conclusions arrived at by us, would, after due investigation and consideration of the subject, respectfully submit the following report:—

The committee, having been duly notified by the chairman thereof, appointing the seventh day of July, 1887, for a meeting of said committee, met at Portland, Oregon, for the purpose of considering the proper mode of proceeding in the matter.

The members of the committee who were present at the meeting held on the aforesaid day, were Senator L. T. Barin, chairman of the committee, and Representatives J. W. Maxwell and M. Pomeroy. The other members of the committee—Senator J. C. Allen and Representative Bilyeu—were absent.

On the eighth day of July the committee started from Portland to the cascades to make a thorough investigation there. From there they went to The Dalles and to other points up the river as far as Celilo, and thence they went to Astoria and vicinity, including Baker's bay, and returned to Portland, July 16th. On the twenty-eighth day of September, 1887, they went to Yaquina bay and investigated, at that time, the fish interests of that bay and vicinity. By invitation of the committee, the Oregon State fish commission accompanied the committee to all the points herein named, as did also Major Jones of the United States engineer corps, except on our return from The Dalles to Portland, when he was compelled to leave us. It would perhaps be well to mention here that the conclusions arrived at by the commission, and also by Major Jones, coincided in the main with those of the committee.

The great difficulty that we met with, and perhaps the greatest obstacle that the legislature will have to surmount, is the feeling that exists more or less among fishermen, that the particular mode of fishing in which they are engaged is the only proper one and the one least injurious to the fish industry of the State, and that all other modes of fishing are, therefore, far more detrimental. In fact, many of the fishermen of each locality judge of the question solely with a view to what is most advantageous to them, and argue as to the mode of fishing employed by them wholly from the standpoint of self interest.

In our investigation of the subject we have endeavored to reach, if possible, such conclusions (which is doubtless the purpose for which the committee was appointed), as would, if embodied in legislative enactments, tend to stimulate the fish industry of the State, and at the same time keep up and if possible increase the supply of fish available for that purpose.

To the end that the legislature may be able to arrive at a more perfect understanding of the matter, it would perhaps be well, before proceeding further, to name the different species of salmon of commercial value—those which are used for canning, sold in our markets, and shipped to and sold in other States, and which ascend the Columbia river and other rivers of our State and enter our bays; also the time that they deposit their spawn.

We shall first treat the question as pertaining to the salmon ascending the Columbia and its tributaries.

The first salmon that ascend this river and its tributaries are the largest and best quality of the Chinook (or the genus *Oncorhynchus Quinnat*). They commence running in March and run until July, and even two or three weeks later. The July run of Chinook salmon, of smaller size but very good, run in July and August, and some even after September.

Blue-backs begin to run in June, but they do not ascend the tributaries of the Columbia until they have passed the cascades, and perhaps Celilo also. We are not sufficiently well informed as to the time and place of the spawning of the Blue-back to give a well-founded opinion.

The next species that ascends the river is the Silver salmon, and they ascend about the first of September.

The next to ascend the river are the Steel-heads, and they are found in the Columbia as early as the first of July, but do not ascend its tributaries until after the middle of October. Fish of this species (Steel-heads) are generally called salmon, though they are in reality sea-trout. In our close seasons many fishermen in our State have taken them, claiming that they are not salmon, and consequently not entitled to protection under the salmon law of our State. It would, therefore, in case of the enactment of a new fish law in this State, be necessary for the purpose of protecting Steel-heads that a specific clause be inserted which would protect that species of fish during the close days and seasons.

The Chinook that ascend the Columbia differ very much in size, ranging from three or four up to seventy pounds in weight. Both the spring and the July runs that ascend the river are the best for canning purposes, and find the best market abroad.

The Silver salmon, like the Chinook, differ much in size, and range from two or three to fifteen or eighteen pounds in weight; some perhaps even larger. They are fair table fish, and are used for canning, but are not by any means as good as the Chinook.

The Steel-head, varying from eight to twenty pounds in weight, is also used for canning and table purposes; is very good, but not first-class. It is considered an excellent fish, both for shipping purposes and for smoking.

The Blue-back weighs from three to six pounds, is the smallest salmon that ascends the Columbia, but is an excellent fish for table use, and very desirable for canning on account of the color and excellence of its flesh.

Chinook salmon (the spring run) begin to spawn towards the last of August, and continue until the middle of October. Chinook salmon, known as the July run, commence spawning about the middle of September and spawn till the last of October, and some even a few days after the first of November.

Silver salmon spawn from December 1st till the last of January; some even early in February.

The Steel-heads spawn from about April 1st to the middle of May.

In fact, every species of salmon that ascends the Columbia river and its tributaries has a distinct time for spawning; so that the assertion so often made that the inferior species of salmon might be bred or mixed with the Chinook salmon, or one species with the other, at the established hatcheries or breeding stations, is absolutely without foundation.

This remark is here made for the reason that the subject of hatcheries or breeding stations will be hereafter treated in this report.

The different modes of fishing carried on in the Columbia and its tributaries consist of gill-net, pound-net, seine, dip-net, trap, fish-wheel, and perhaps some other modes less generally used. As has already been stated, parties engaged in either of the different modes of fishing named, generally insist that that particular mode of fishing is least injurious to the fish interest of the State; and a great deal of complaint has been made and many objections have been urged against fishing with traps, wheels, seines, and similar appliances. The main objection urged against the modes of fishing just enumerated, is that they are detrimental to the fish interest of the State in this way, that they destroy very many small fish (salmon), and by the destruction of the small fish cause a gradual falling off in the supply of salmon; and it is urged that this mode of fishing is so destructive that it will ultimately cause the annihilation of the salmon industry of the Columbia. We have therefore undertaken to make a thorough investigation of that subject, and have done so to the best of our ability, to such an extent that we feel confident that we have arrived at the proper solution of the question.

The small fish or salmon that are caught with the last named appliances, and which it is claimed are destroyed by such modes of fishing, consist principally of small Chinook salmon, and weigh from three or four to seven or eight pounds. They run at the same time and with the large, or what we term the Royal Chinook salmon. The other small fish caught are Blue-backs, and a very few small Steel-heads. The Blue-backs of the sizes caught are what we consider the average of the run, and of the small Steel-heads that are caught, there are too few to be worthy of consideration.

The small fish thus caught, of the destruction of which complaint is made, consist then almost exclusively of small Chinook salmon.

There seems to exist quite a diversity of opinion with regard to the small salmon referred to, some persons asserting that they are small Chinooks, while others insist, on account of the paleness of the flesh, that they are another and different species, or White salmon. The last claim is made mainly by persons interested in those modes of fishing by which small fish are taken. After a thorough investigation, we feel that we can positively assert that those small salmon so taken, not including Blue-backs and Steel-heads, are small Chinook salmon, and we shall here give our reasons for coming to that conclusion.

During our investigation up and down the Columbia, we carefully compared those small salmon with the large salmon, and we found that in every respect, except color of flesh, they had the same distinguishing characteristics that the large salmon have. We also had hundreds of those small salmon opened and every one of them proved to be a male salmon. The smallest female salmon found by us during all our investigation was one caught near Astoria, which weighed nine and one half pounds.

The chairman of this committee has had the opportunity of examining into that question for many years; he has examined hundreds — he could safely say thousands — of those small salmon, and all that he has ever examined were male, except one, and that one weighed eight and one half pounds, that being the smallest female salmon ever seen by him, the next smallest being the one seen by the committee and weighing nine and one half pounds.

Now, if those small salmon ranging from three to seven pounds are another and different species of salmon, this committee would like to have it explained how it is possible for any species of salmon to propagate and exist when all of that species are males. Now, as to their being White salmon, we find that when they weigh three or four pounds, they generally have very pale meat; at five or six pounds, their meat is a little pinkish; at seven or eight pounds it assumes a redder color; but when one is caught weighing eight or ten pounds, then nobody disputes its being a genuine Chinook salmon. And yet, further, any person who has ever seen a Silver salmon, whether large or small, can never mistake that species of salmon for any other on account of the peculiar formation of the point of its head, also the pinkish color of its mouth; yet when the Silver salmon run the same peculiarity may be observed as when the Chinook salmon run; that is, the small Silver salmon weighing from two to five or six pounds also run. There is no mistaking those small salmon—they have the same shaped head, the same pinkish mouth as the large Silver salmon, and no one would have the hardihood to assert that they are not small Silver salmon; therefore, if small Silver salmon run during the running season of that species, why should it be impossible that small Chinook salmon should run during the running season of the Chinooks? We repeat that we have no hesitation in insisting that the small salmon caught in the traps and wheels are small, prematurely developed Chinook salmon.

The question that now arises is whether or not the taking of them is injurious to our fish industry. If those small salmon referred to ascend the river and return to the ocean and again ascend the river a larger salmon, then of course it is injurious to our fish industry to take them while they are small; but if on the contrary they ascend the river, perform their functions the same as the large salmon, and then die, in that case the taking of them while small is not hurtful to the fish industry of the State, but to the contrary beneficial for reasons which will be hereafter explained.

The most reliable authorities on the subject, and those who have made the most thorough investigation into the habits of the Chinook salmon, assert that they ascend our rivers and after they have completed spawning, die. See Johnson's Cyclopædia, vol. IV, part I, page 43, wherein will be found the following statement referring to the *Oncorhynchus*, otherwise known as the *Salmo Quinnat*, our Chinook salmon: "Some of the species of the genus *Oncorhynchus* of the Pacific coast, however, become so abnormally developed that after spawning they die, and their carcasses are left by myriads in the waters they have traversed."

Nevertheless, in the face of all authorities, we were not satisfied as to the correctness of the assertions on that subject; in fact, we

[illegible] season [illegible] the [illegible] [illegible] [illegible] [illegible] to the

[illegible] Chinook salmon that may possibly return to the ocean spawning are some very large ones, with [illegible] [illegible] [illegible] [illegible] within a few miles of the [illegible] or even [illegible] water [illegible] the [illegible] and [illegible] near the mouth of the [illegible]. Such salmon would easily [illegible] [illegible] into the [illegible] they again ascend the Columbia would [illegible] be [illegible] salmon. The [illegible] [illegible] in a [illegible] manner [illegible] [illegible] when they ascend the river to spawn are so much larger [illegible] from others.

[illegible] concerning the small salmon previously referred to as [illegible] males. They are as before stated, [illegible] [illegible] with regard to their generative organs, and all [illegible] small [illegible] [illegible] as far as [illegible] purposes are [illegible]. The same is also true of the small Silver salmon that run the same time the larger ones [illegible], and the eggs of a large [illegible] impregnated with the milt of one of these small salmon [illegible] hatch, as has been demonstrated, fully as well as if the eggs [illegible] impregnated with the milt of a large male. But it seems [illegible] that [illegible] [illegible] from small male salmon would certainly [illegible] the species, and why should it be considered desirable [illegible] there is in fact an excess of large males over the female [illegible]

[illegible] have therefore arrived at the conclusion that the taking of [illegible] Chinook salmon by traps, wheels, or other appliances is no loss to the fish industry of the State, while to the [illegible] salmon of that size that escapes is so much loss to our [illegible] interests.

[illegible] from the report of the State Fish Commission that "it is [illegible] general belief that all or nearly all of the salmon, both large and small, which go up the river, die after their spawning [illegible]; however, it may be well to protect the small ones, as [illegible] are of no commercial value."

[illegible] differ from their conclusions on this point, for if it is true [illegible] the small salmon die as they undoubtedly do, then why not [illegible] them, for they certainly are of commercial value? They sell [illegible] our markets for the table and are preferred by many [illegible] on account of their size and delicious flavor. They also [illegible] well as an inferior salted salmon, and find a ready market [illegible] shipped abroad as fresh salmon. Besides, to enact a law [illegible] the minimum size of each variety to be taken, and all [illegible] this size to be returned to the water alive, with a severe [illegible] for killing, would cause more litigation, trouble and [illegible] to the State than the result would warrant, even were [illegible] to preserve them, and besides, if such a law should [illegible] how is the weighing and measuring to be done? We [illegible] it would be impracticable.

did lean to the other side of the question. During our investigation we therefore endeavored to satisfy ourselves as to the correctness of the authorities on that subject, and whether some of the salmon do not live to return to the ocean after spawning; but after a thorough investigation, we had to arrive at the conclusion that the authorities were right, and that the Chinook salmon after spawning dies. In investigating that subject, we talked with many persons who had for years resided upon tributaries of the Columbia into which the Chinook salmon ascend for propagation, — intelligent persons and men who have had a good opportunity for observing and arriving at correct conclusions, — and all of the statements made by such persons went to show that the salmon die after spawning. Some persons, it is true, are of the opinion that Chinook salmon do return to the ocean after spawning; but such persons have never been able to bring any evidence in support of their assertions. The most conclusive evidence by far was brought to light by the building of the fish rack across the Clackamas river to keep those salmon from ascending that were to be used for propagating purposes at the State hatchery there during the year 1887. That year the rack was not put into the river until after the middle of June; consequently all the run of Chinook salmon from February until the rack was put in had passed up above the rack. After the spawning season was over we caused the rack to be watched to see whether the salmon that had passed up the river for spawning would return. The president of the State fish commission and parties employed at the State hatchery watched that rack continually for the purpose stated; and here be it understood that no salmon from above could pass through that rack, and every salmon, whether dead or alive, that came down to the rack could be seen. The chairman of this committee also went there several times to investigate that question; and the result of all these investigations was that all the salmon that came back to the rack — salmon which in their prime would have weighed from four to seventy pounds — were found to have come back dead, in fact were washed down by the current.

While the rack has proven without a doubt that the Chinook salmon die after spawning, it has also proven without a question or doubt that the Steel-head does return to the ocean after spawning; for this year — also one time in former years, when the hatchery was operated by the Oregon and Washington Territory Fish Propagating Company — the rack was put in early in the spring, before the Steel-heads had finished spawning and returned to the ocean, and when after spawning and on their return they came to the rack they could not pass through, and they remained above the rack for months by hundreds or thousands. Their sores and bruises healed, and when the rack was taken out after spawning season at the hatchery they doubtless returned to the ocean.

The only Chinook salmon that may possibly return to the ocean after spawning are some very late comers, who by force of nature are compelled to spawn within a few miles of the ocean, or even in brackish water on the sands and spits near the mouth of the Columbia. Such salmon would easily drift back into the ocean, and if they again ascend the Columbia, would doubtless be very large salmon. This would explain in a rational manner why some salmon when they ascend the river to spawn are so much larger and older looking than others.

Now, concerning the small salmon previously referred to as being all males. They are, as before stated, prematurely developed with regard to their generative organs, and all, no matter how small, fully matured as far as propagating purposes are concerned, (the same is also true of the small Silver salmon, that run at the same time the large ones run), and the eggs of a large salmon impregnated with the milt of one of these small salmon would hatch, as has been demonstrated, fully as well as if the eggs had been impregnated with the milt of a large male; but it stands to reason that to breed from small male salmon would certainly deteriorate the species, and why should it be considered desirable when there is in fact an excess of large males over the female salmon.

We have, therefore, arrived at the conclusion that the taking of small Chinook salmon by traps, wheels, or other appliances is not injurious to the fish industry of the State, while to the reverse, every salmon of that size that escapes is so much loss to our commercial interests.

We see from the report of the State fish commission that "it is the general belief that all, or nearly all, of the salmon, both large and small, which go up the river, die near their spawning grounds; however, it may be well to protect the small ones, as they are of no commercial value."

We differ from their conclusions on that point; for if it is true that the small salmon die, as they undoubtedly do, then why not take them, for they certainly are of commercial value? They sell well in our markets for the table, and are preferred by most families on account of their size and delicious flavor. They also sell well as an inferior salted salmon, and find a ready market when shipped abroad as fresh salmon; besides, to enact a law "stating the minimum size of each variety to be taken, and all under this size to be returned to the water alive, with a severe penalty for killing," would cause more litigation, trouble, and expense to the State than the result would warrant, even were it desirable to preserve them; and besides, if such a law should be passed, how is the weighing and measuring to be done? We think that it would be impracticable.

We therefore say without hesitation that wheel, trap, and other like fishing is not injurious to the fish industry of the State; and the objection urged against those modes of fishing, that they take too many fish, is due to prejudice or misinformation, rather than good judgment, for the more salmon there are taken during the proper season, the better it is for our commercial interests, providing the supply can be kept up, and we believe that it can.

This finding may not be agreeable to persons prejudiced against traps, wheels, and seines, or those to whose interests it would be to prohibit those modes of fishing; but it is for the best interests of the State.

Taking this view of the matter, we are of the opinion that all of the existing law regulating the width and size of slats and meshes in traps, wheels, seines, and gill-nets, and for all other modes of fishing, should be repealed, for the reason that it is useless, and does not accomplish the object for which it was intended; and we do not consider it right that trap, wheel, seine, and other like fishermen should be enabled to take fish that gill-net and other similar fishermen are prohibited from taking. It is especially unfair in the case of the Blue-back—a fish, as before stated, of excellent quality, and especially desirable for table and canning purposes—that fish so valuable for the purposes named, can only, under the existing law, be taken by the traps and seines of the lower Columbia and the wheel and dip-net fishing from the cascades to Celilo, while the bulk of those fish pass up and are a total loss to our commercial interests; and we cannot see why the gill-net fishermen on the Columbia from its mouth to the cascades should be debarred from the profit of taking those fish during the proper season, while other classes of fishermen are permitted to take them.

We think it would be well to mention here another objection urged against trap, wheel, and like fishing; and that objection is that these modes of fishing drive many gill-net fishermen out of employment. Even if this were true it might be said, in answer to this complaint, that the trap, wheel, and like fishermen are generally riparian owners; they are resident citizens and taxpayers, while many of the gill-net fishermen are not residents of this State or Washington Territory, but come here from abroad and stay merely through the fishing season, many of them being aliens.

The next question to be considered is how to keep up the supply of salmon in the Columbia river to such an extent that the commercial importance of our fish industry shall be kept up, and if possible increased, and for the accomplishment of that object we would recommend the passage of a law for a close season in which all fishing should be strictly prohibited.

The close season, which now extends until the first of April should be extended until the fifteenth day of that month, and the open season for fishing should be extended from that day, fifteenth of April, to the fifteenth day of August. From the fifteenth day of August to the fifteenth day of September, or first of October, all fishing should be strictly prohibited by law. Also the close days from Saturday evening to Sunday evening should be retained upon our statute books. Such a law would give ample opportunity for a sufficient number of Chinook salmon of the spring run to ascend to their spawning grounds and to breeding stations, one of which already exists on the Clackamas and is now operated by the federal government.

One hatchery should by all means be established by this State, and one by Washington Territory, on waters tributary to the Columbia. Some aid should also be extended by the State to the hatchery on Rogue river.

A hatchery could be established and put into good running order for a sum not exceeding $10,000, and the cost of maintaining and successfully operating it would not exceed $5,000 per annum.

4 Objections are urged by some persons against hatcheries, and it is held that if salmon were permitted to ascend in sufficient numbers to their spawning grounds, and if they were there allowed to spawn in their natural way, according to the dictates of nature's laws, it would produce better results and at the same time avoid the expense of hatcheries; but we cannot agree with that view of the matter; for while that might be the case if salmon were not taken in such large numbers as must necessarily be taken to make our salmon industry of any great importance, it is easy to be seen that while fishing is carried on to the extent that it is now, in order to keep up even the present supply, nature must be aided. In this age of scientific research, invention, discovery, and improved methods, surely no well-informed, thoughtful person will question our ability to bring knowledge, skill, and experience to the aid of nature in the various industrial arts; and in none of them has that ability been more clearly demonstrated than in the art of fish culture.

We now desire to explain, to some extent, the working of the system of artificial propagation to which we have so often alluded.

A female salmon contains in spawn at least 5,000 eggs. When they spawn naturally their spawning beds are infested by hordes of all kinds of fish, of which trout are by far the most ravenous, and they pick up the eggs nearly as fast as spawned, and but few of these eggs can possibly escape. Any person can easily satisfy himself of the truth of this assertion by standing on the river bank when the salmon spawn in shallow ripples on their spawning bed, and there see the hordes of small fish infesting each bed. But perhaps the most peculiar and the strangest part of the whole matter is the fact that the eggs of the salmon impregnate far more readily and much more certainly out of than under water. That matter has been tested by the State fish commission with the result stated; and since then we have investigated that question and have consulted different authorities on that subject, and we find in Johnson's New Universal Cyclopædia, vol. II, part 1, page 120, a statement of great interest in regard thereto. We find many statements of interest and having a direct bearing upon the subject, which are too long to be quoted here, but two paragraphs apposite to the point at issue we will here present: "The fecundation of the eggs being merely a mechanical process, this artificial mixing impregnates them better than if the fish had mixed the eggs and milt themselves." And again: "Shad eggs are usually taken in water instead of in a dry pan, the eggs impregnating as well in water as without, while with *salmonidæ* eggs, unnatural as it seems, the presence of water is unfavorable to impregnation."

But aside from the destruction of eggs by small fish, and the fact that the natural method is much less favorable to impregnation of the ova than the artificial, the natural process is not conducive to the keeping of the supply at all in comparison with the artificial process, or, to express the idea more correctly, the natural supplemented by the artificial; for reason that the comparatively small number of eggs that are impregnated and have escaped destruction by fish are, when they hatch out, but helpless waifs in the water, without mouth, tail or fin, half fish and half egg; for the egg, which they gradually absorb, clings to them, and not until the egg is absorbed are they complete fish, able to take care of themselves; and during this early period of their existence the egg and the incomplete little salmon are a tempting bait for trout and other fish. We deem it doubtful whether an average of more than a half dozen young salmon are propagated in the natural way from one female salmon, while a sufficient number of experimental tests has been made to prove that by the artificial method of propagation at least ninety per cent of the eggs of a female salmon — or an average of four thousand five hundred young salmon — can be hatched out and kept until they are large enough to take care of themselves and then turned into the river.

Three hatcheries on the tributaries of the Columbia river would, with proper management, turn into the river at least 15,000,000 young salmon annually. That number turned into the river annually, in addition to those that spawn naturally, would more than keep up the supply, and the number could be gradually increased as the salmon increased at the propagating stations, until at least forty or fifty million could be supplied annually, which would be greatly in excess of the requirements of the fishing industry on the Columbia river, and many young salmon could refore be turned into our coast rivers and thus keep up the supply in those streams. Besides, in addition to Chinook salmon, Silver salmon, and Steel-heads could be propagated at the hatcheries, and thus keep up the supply of those fish in the bays and rivers of the State, and especially in the coast rivers. As the last named streams are principally what may be termed natural traps, a few years' continuous fishing and canning on them will totally destroy that industry, so far as they are concerned, unless some measures are taken to re-stock them.

Neither this State nor Washington Territory should hesitate to expend a mere trifle on an industry that is so beneficial to both; and since the art of fish culture has been brought to its present degree of successful development, there is hardly a civilized country which has not one or more fish-breeding establishments, public or private.

What would be absolutely necessary, however, for the successful operation of fish hatcheries, would be the rigid enforcement of the close seasons; and we think that the fine now imposed for the violation of the close season is excessive, and for that reason it is difficult and frequently impossible to secure the conviction of persons for violation of that law. We think a fine of from one hundred to two hundred dollars would operate more successfully. A law upon that subject should be plain, direct, and not ambiguous—easily understood and easily enforced. There should be a provision made for police regulations to enforce such a law. It would be well in such an act to include a provision by which the informer should, upon conviction of a person or persons for a violation of the law, receive a part of the fine. Such an act should further provide that the boats, nets, traps, wheels, and the fishing appliances used in violation of the law, should not be exempt from execution, and that the sheriff of the county or constable of the precinct in which the conviction is had shall be empowered to sell the appliance or appliances thus used in violation of the law, and out of the proceeds of such sale pay the fine and costs, unless such fine and costs are otherwise paid. We think that such an act would retard cannerymen from furnishing fishing appliances to irresponsible persons.

The fish commission should also have the power and means to appoint, at a moderate cost, parties to watch the river during the few months of the close season. Such a provision need not occasion any great expense, as it is only necessary at a few points, and it would doubtless have a good effect. We feel confident that the present State fish commission did their best, during the last two years, to enforce the law; but it was impossible for them to meet with perfect success without any means or power at their command, and with the ambiguous and questionable law now in force. Considering the circumstances, it is only surprising that they succeeded as well as they did, which leads us to believe that a good law could be enforced.

We would also deem it well to offer a small bounty for the destruction of seals and sea lions.

There should also be a law prohibiting the throwing or discharging of sawdust into the Columbia or any of its tributaries; also into the Nehalem, Tillamook, Nestucca, Yaquina, Alsea, Siuslaw, Umpqua, Coquille, and Rogue rivers or their tributaries, or into Coos bay.

We would further recommend the levying of a small tax upon all salmon caught, and upon cases of salmon put up at the canneries, and thus raise a sum towards defraying the expenses for the protection of salmon and for a hatchery.

All fishing for salmon within one mile of any hatchery established for the propagation of salmon and in the river on which such hatchery is established should be prohibited; and the rack across such river necessary for the successful operation of such hatchery should be protected by law.

It would also be advisable that a law should be enacted to prohibit, under penalty, any public or private carriers from carrying in or out of this State any salmon during the close season extending from the first of March to the fifteenth of April, or any of the close days during the year; also to prohibit all persons from selling, offering for sale, giving away, or having in possession any salmon during the close days and seasons just named. Such a law could be easily enforced, for during those times no fishing should be carried on in any part of the State. In would not, however, be so easy to enforce a law to prevent public or private carriers from carrying salmon during the close season from the fifteenth of August to the first of October, for at that season the fishing commences and is carried on to its prime in our coast rivers; and it would not be just to bar the fishermen from those rivers from sending their fish to market in or out of the State, or selling them in Portland or other cities.

As to the coast rivers, we have only examined the Yaquina river and its bay; but from what we can learn all the coast rivers seem to be similar in formation.

The fish in those streams consist principally of the fall Chinook and Silver salmon and Steel-heads; and they begin to run from the first to the middle of August, or about the time that the fall close season begins on the Columbia.

The fishing on Rogue river, as to time and fish, is similar, especially in the spring, to the fishing on the Columbia.

To avoid all question or debate as to the law regulating salmon fishing on the Columbia being a local law, and therefore unconstitutional, there should be passed by the legislative assembly of Oregon one general law to regulate the fishing and the time thereof in the different rivers and bays of the State. The fishing season on the Nehalem, Tillamook, Nestucca, Yaquina, Alsea, Siuslaw, Umpqua, and Coquille rivers and Coos bay should begin on the fifteenth day of August and close on the fifteenth day of November of each year; and no fishing should be allowed in any of the rivers or bays of the State from Saturday evening until Sunday evening at 6 o'clock during any part of the year.

The fishing seasons on Rogue river could be made to correspond with those of the Columbia.

Should a law be enacted for the protection and preservation of salmon, each species of commercial salmon should be specified as follows: "'Chinook salmon,' 'Silver salmon,' 'Blue-backs,' and 'Steel-heads'; and for the purpose of properly enforcing the law, all those species named shall be deemed salmon within the meaning of this act."

Respectfully submitted,

L. T. BARIN,
J. W. MAXWELL,
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Committee.

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